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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,520	08/22/2003	Joachim Tachtler	080437.52615US	8771

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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/645,520	<b>Applicant(s)</b> TACHTLER ET AL.	
	<b>Examiner</b> Jonathan S. Crepeau	<b>Art Unit</b> 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-9 and 12 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 5-12. Claim 10 remains objected to and claims 5-9, 11, and 12 remain rejected over Diethelm. Accordingly, this action is made final.

### ***Claim Rejections - 35 USC § 102***

2. Claims 5-9, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Diethelm (U.S. Patent 5,212,023). The reference is directed to a solid electrolyte fuel cell comprising an integrated heat exchanger (see abstract). The heat exchanger is an intermediate plate that separates two fuel cells (40) and comprises at least two partial elements (i.e., plates 31a, 31c) (see Figs. 3 and 5). Intake air (stream “A”) is passed through the heat exchanger and is then routed in the opposite direction across the surface of the cathode (stream “B”). Stream “A” is in direct thermal communication with stream “C,” the anode fuel gas, across plate 31c. Regarding claims 5 and 12, the “partial elements” can be defined as the flat central regions of the separator plates (31a, c) and as such are “mirror images” of each other. Regarding claim 6, if the “partial elements” are defined to include the peripheral regions of the plates, a baffle (47a) is present between the partial elements that causes successive, opposite-direction flow regions to develop in the heat exchanger. As shown in Fig. 6 and described at column 7, line 43, the annular duct (47) on the outside of the baffle is a heat exchange region that corresponds to the

claimed first partial flow region. Regarding claims 8 and 9, the “partial elements” may also be defined to include nubs or spacer elements (shown near 46’ and 44 in Fig. 6).

Thus, the instant claims are anticipated.

### ***Response to Arguments***

3. Applicant’s arguments filed February 9, 2006 have been fully considered but they are not persuasive. Applicant states that the Diethelm reference does not teach the newly-claimed feature of “at least one conducting end or intermediate plate extending between opposing faces of the at least two individual cells.” However, it is submitted that, in a broad sense, the plates 31a, 31c “extend between opposing faces” of the individual fuel cells. The claim language does not specify that the plates must physically contact the individual fuel cells, although this appears to be the language’s intent. Further, Applicant states that the reference does not teach that the mirror image partial elements are “arranged essentially perpendicular to the opposing fuel cells” as called for in newly amended claim 1. However, it is submitted this recitation is also subject to a broad interpretation and therefore does not define over the reference. The recitation may simply be interpreted as requiring the presence of the elements in an area orthogonal to the plane of the fuel cells. Diethelm discloses such a configuration. Therefore, it is submitted that the amendatory language is still not patentably distinguishable from Diethelm.

***Conclusion***

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

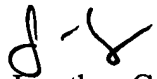
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
April 12, 2006